REMARKS

Initially, the Applicant filed a Supplemental Preliminary Amendment on December 26, 2002. It appears that this did not make it to the file before the Examiner issued the present Office Action. Nevertheless, the claims are included herein.

The Examiner objected to the drawings as failing to comply with 37 C.F.R. 1.84(p)(5). The Examiner also objected to the drawings due to other minor informalities.

The Examiner rejected claims 8 and 9 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Smith. The Examiner also rejected claims 8 and 9 under 35 U.S.C. § 103(a) as obvious over Smith in view of either Langer or McFarland et al. Further, the Examiner rejected claims 10 and 11 under 35 U.S.C. § 103(a) as obvious over Smith as applied to claim 8, and further in view of Berger. Additionally, the Examiner rejected claims 10 and 11 under 35 U.S.C. § 103(a) as obvious over Smith in view of either Langer or McFarland et al as applied to claim 8, and further in view of Berger. Moreover, the Examiner rejected claims 1, 5-7, 20-26 under 35 U.S.C. §103(a) as obvious over Smith in view of either Mapel or Dewhurst. The Examiner also rejected claims 2-4 and 24 under 35 U.S.C. §103(a) as obvious over Smith, in view of either Marpel or Dewhurst as applied to claims 1 and 22, and further in view of either McFarland et al. or Langer.

Finally, the Examiner provisionally rejected claims 1-4, 8, and 20-26 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 09/705,602 in view of either Dewhurst or Marpel, and further in view of Langer or McFarland et al.

The Objections to the Drawings:

The Examiner objected to the drawings because they did not include various reference numbers mentioned in the description, including the following numbers: 98, 100, 102, 104, 64, 88, and 86. The Applicant has re-reviewed the specification and the drawings and inserted all of the above reference numbers as well as a couple of additional reference numbers. It is submitted that all reference numbers identified in

the description are now illustrated in the proposed corrected drawings submitted herewith.

The Examiner also objected to the drawings because the lead lines for elements "46" and "62" were improperly labeled. These informalities have been corrected and are also illustrated in the enclosed proposed corrected drawings.

The Examiner also objected to the drawings because the reference character "88" was used in the drawings and specification to designate both "space" and "arrows." The specification has been corrected above to reflect that the "space" is identified by reference number "86" and the arrows around the slide are identified by number "88."

It is submitted that all objections to the drawings have been overcome.

The Section 102(b) Claim Rejections:

The Examiner rejected claims 8 and 9 under 35 U.S.C. § 102(b) as anticipated by Smith. Claim 8 as amended requires a method of gathering airborne particles in an air sampler. The method includes providing a microscope slide which is located in the air sampler. The microscope slide is prepared with an adhesive media and the microscope slide is loaded into the air sampler and the sampler is assembled by attaching a top portion to a bottom portion to form the sampler. A vacuum source is connected to an outlet opening of the sampler. Air is then drawn into an inlet opening formed in the top portion of the sampler with the inlet opening being substantially smaller than an upper surface of the top portion. The inlet opening is configured such that air accelerates after it enters the inlet opening. Thereafter, the inlet opening includes a laminar section, which directs the air such that it impacts the adhesive media in a perpendicular direction.

Conversely, Smith teaches a device having an inlet opening with a passage 23 that only converges toward the slide 36. The disclosed passage 23 has two opposing walls that converge toward one another from the inlet to the slide. In this fashion, the air entering the inlet opening will accelerate, but will not impact the microscopic slide in a perpendicular fashion. Instead, as will be readily understood by one of skill in the art, much of the air will impact the slide at an angle which can adversely impact the trace results collected on the microscopic slide 36. It is submitted that the Examiner's

reading of Smith is incorrect in that all of the air exiting the passage will not strike the slide 36 in a perpendicular direction. Moreover, Applicants' claimed invention includes a laminar section, which allows for the air to strike the slide in a perpendicular direction. As Smith does not provide both a section for accelerating the air and a separate section for directing all the air in a perpendicular direction, it does not embody every element of claim 8.

It is thus submitted that claim 8 clearly defines over the art of record. It is also submitted that claims 9 – 11, which depend from claim 8 are allowable for the same reasons.

The Section 103(a) Claims Rejections:

Claims 8 through 11:

The Examiner rejected claims 8 and 9 under 35 U.S.C. § 103(a) as obvious over Smith in view of either Langer or McFarland et al.

The Smith reference does not teach Applicants' invention of claim 8 for the reasons set forth above. Similarly, neither the Langer nor McFarland et al. teach or suggest either alone or in combination Applicants' claimed invention. First, the Langer reference does not teach the step of accelerating the air in the inlet opening. As shown in Figure 4 of the McFarland reference, the inlet openings 16 have only a perpendicular portion and thus, the step of accelerating is absent. The portion to which the Examiner refers is not the inlet opening and is instead located beneath the slide and adjacent the outlet opening. There is simply no teaching or suggestion to combine this inlet opening with the inlet opening in Smith. A rejection based on such a combination would clearly constitute improper hindsight reconstruction.

Similarly, the McFarland reference does not teach the step of directing the air through a laminar section to impact the slide in a perpendicular fashion. The opening to which the Examiner refers (Figure 3) is not different from the Smith reference in that it only teaches acceleration of the air, it does not teach a laminar portion through which the air passes in the inlet opening. Thus, neither the Smith nor McFarland reference, either alone or in combination, teach or suggest Applicants' claimed invention. Any rejection based on such a combination would be improper because neither reference teaches a laminar section.

It is thus submitted that claim 8, and claims 9 – 11, which depend from claim 8, are allowable over the art of record. Accordingly, Applicants' request that these rejections be withdrawn.

Claims 1 through 7:

The Examiner rejected claims 1, 5-7, and 20 - 21 under 35 U.S.C. § 103(a) as obvious over Smith in view of either Marpel or Dewhurst. Independent claim 1 requires "an inlet opening having an outer venturi section and an inner laminar section such that air entering the sampler impacts said adhesive media." Moreover, claim 1 also requires that the inlet opening be a slit, such that the air sampler is a slit impaction air sampler. In accordance with the operation of the Applicants' claimed invention, the air enters the slit formed the top surface. The air then passes to the outer venturi section where it is accelerated. The air is then passed to an inner laminar section that directs the air such that all the air impacts the adhesive media in a perpendicular direction. The venturi section accelerates the air to ensure that it strikes and does not pass around the microscopic slide.

Conversely, Smith teaches a device having an inlet opening with a passage 23 that only converges toward the slide 36. The disclosed passage 23 has two opposing walls that converge toward one another from the inlet to the slide. In this fashion, the air entering the inlet opening will accelerate, but will not impact the microscopic slide in a perpendicular fashion. Instead, as will be readily understood by one of skill in the art, much of the air will impact the slide at an angle which can adversely impact the trace results collected on the microscopic slide 36. It is submitted that the Examiner's reading of Smith is incorrect in that all of the air exiting the passage will not strike the slide 36 in a perpendicular direction. On the other hand, Applicants' claimed laminar section allows for all of the air to strike the slide in a perpendicular direction. As Smith does not provide both a section for accelerating the air and a separate section for directing all the air in a perpendicular direction, it does not embody every element of claim 1.

Moreover, neither the Marpel nor Dewhurst references disclose or suggest a configuration that would arrive at Applicants' claimed invention. Contrary to the Examiner's statements in the Office Action, Marpel does not teach the use of a nozzle

with both a venturi section and a laminar section. Marpel only teaches a device having an orifice 20 formed therein that has a chamfered or rounded periphery as is well known in the art with nozzles. The specification does not mention anything about the configuration of the nozzle and it is clear from the figures that the chamfered periphery is relatively insignificant in size and does not provide any appreciable acceleration of the air. The acceleration of air is desirable to provide consistent trace results. However, in view of the relatively small size of the orifice or nozzle 20 disclosed in Marpel, the chamfer is intended to provide a slightly larger area for air to enter the rounded orifice and will not cause the air to accelerate. Further, the rounded orifice configuration also teaches away from the claimed slit impaction sampler which provides narrow elongated traces on the microscopic slide. The benefits of slit impaction are highly desirable and are required by claim 1 of Applicants' invention.

Similarly, Dewhurst does not teach a slit impaction sampler which provides trace line impaction, but instead teaches trace circular impaction. Moreover, Dewhurst also teaches away from Applicants' claimed invention by providing an extremely large inlet opening. The inlet opening comprises substantially the entire top surface of the device. Moreover, the inlet opening does not provide for slit impaction. Thus, there is no motivation or suggestion to combine Dewhurst with Smith to arrive at Applicants' claimed invention. To do so, as the Examiner suggests, constitutes impermissible hindsight reconstruction.

It is submitted that claims 2-7, which depend from claim 1, are allowable for the same reasons.

Claims 20-26:

The Examiner rejected claims 20-26 under 35 U.S.C. §103(a) as obvious over Smith in view of either Mapel or Dewhurst.

Applicants' invention of claims 20 and 22 require an inlet passageway in communication with an inlet opening to convey air entering the sampler to the slide. The inlet opens to a passageway having a venturi section located immediately adjacent the inlet and a laminar section located adjacent the venturi section. Additionally, the

passageway has a non-circular opening adjacent said slide to direct the air at the slide in a generally elongated fashion.

Such a configuration is not taught by either Smith or Dewhurst. As discussed above, the Smith reference at best only teaches a venturi section for accelerating air; it does not teach any laminar section and therefore does not teach or suggest the benefits provided by such a configuration. Moreover, the Dewhurst reference teaches an inlet that is not formed in close proximity to the slide. Further, the inlet is relatively large and has a circular section adjacent the input end to increase inlet efficiency "by significantly reducing turbulence in and around the vicinity of the inlet." (Col. 4, lines 65-68.) Therefore, Dewhurst specifically teaches away from Applicants' claimed invention of immediately accelerating the air once it enters the inlet. Instead, Dewhurst is concerned with providing a large enough opening to draw in air. Moreover, Dewhurst teaches a circular opening, which does not provide a trace sample on the slide. As is known, trace samples on the slide provide significant advantages in analyzing the samples.

Accordingly, it is submitted that none of the references of record teach or suggest Applicants' invention of claims 20 and 22. Moreover, it is submitted that claim 21, which depends from claim 20, is allowable for the same reasons. It is also submitted that claims 23 – 26, which depend from claim 22, are allowable for the same reasons.

Provisional Double Patenting Rejection:

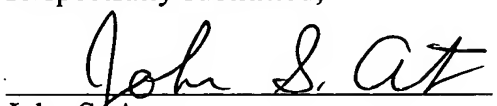
The Examiner has previously rejected claims 1 – 7, 8, and 20 – 26 under the judicially created doctrine of obviousness-type double patenting. Accordingly, Applicants are submitting a properly worded terminal disclaimer to overcome this provisional rejection.

CONCLUSION

It is therefore submitted that all pending claims are now in a condition for allowance. A Notice of Allowance is therefore respectfully solicited.

If the Examiner should have any questions, he is urged to contact the undersigned at 248-223-9500.

Respectfully submitted,



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